

November 7, 2001
Project No. 97664V3

Mr. Todd Croft
Nevada Division of Environmental Protection
555 E. Washington, Suite 4300
Las Vegas, NV 89101-1049

RE: Results of monthly surface water sampling of the Las Vegas Wash at the Northshore Road Bridge.

PROVIDING

- Geotechnical Engineering
- Construction Materials Engineering
- Environmental Engineering
- Drilling Services

Dear Mr. Croft:

Per your request, Geotechnical & Environmental Services, Inc. (GES) obtained a surface water sample from the Las Vegas Wash on October 25, 2001 near the Northshore Road Bridge. We sent this sample, under chain-of-custody protocol, to NEL Laboratories (NEL) for laboratory analysis of perchlorate. NEL's analysis revealed a perchlorate concentration of 420 micrograms per Liter ($\mu\text{g/L}$). The NEL report is included with this letter, along with Perchlorate Summary Tables for 2000 and 2001.

In addition to the sample GES collected and submitted to NEL, a split sample was collected per the request of Mr. Kevin Mayer, with the US Environmental Protection Agency (USEPA). This split sample was collected at the same time and in the same manner as the sample submitted to NEL, and was sent, under chain-of-custody protocol, to the USEPA Laboratory in Richmond, California.

Our services were performed using that degree of care and skill ordinarily exercised under similar circumstances by reputable engineering firms in this or similar localities. No other warranty, either express or implied, is included or intended in this report. We appreciate this opportunity to provide our services. If you have any questions regarding these results, please feel free to call us at 365-1001.

Sincerely,

Geotechnical & Environmental Services, Inc.

Richard Cooke
Staff Geologist

Daniel C. Burns, C.E.M.*
#1692 (Expires 10/07/2003)
Project Manager

*"I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances."

dn

Enc: 2000 & 2001 Perchlorate Summary Tables
NEL Analytical Report

Dist: 1 original mailed to addressee
1 faxed to addressee at 486-2863
cc: fax to Jeff Gibson, American Pacific Corporation
cc: mail to Kevin Mayer, USEPA SFD 72, 75 Hawthorne Street, San Francisco, CA 94105
cc: to project file 97664V3

7150 Placid Street Las Vegas, NV 89119
(702) 365-1001 • Fax (702) 341-7120
www.gesnevada.com

**Las Vegas Wash at Northshore Road Bridge
2000 Summary of Perchlorate Concentrations**

Date Sampled	Perchlorate (µg/L)
1/27/00	569
2/28/00	720
3/29/00	870
4/27/00	750
5/30/00	740
6/28/00	410
7/27/00	650
8/28/00	510
9/27/00	430
10/26/00	340
11/29/00	370
12/26/00	320

**Las Vegas Wash at Northshore Road Bridge
2001 Summary of Perchlorate Concentrations**

Date Sampled	Perchlorate (µg/L)
1/25/01	280
2/27/01	350
3/27/01	480
4/26/01	320
5/29/01	240
6/27/01	400
7/25/01	550
8/27/01	420
9/27/01	460
10/25/01	420

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Boise

Las Vegas Division
4208 Arcata Way, Suite A • Las Vegas, Nevada 89030
702-657-1010 • Fax: 702-657-1577
1-888-368-3282

CLIENT: Geotechnical & Env. Serv.
7150 Placid
Las Vegas, NV 89119
ATTN: Dan Burns

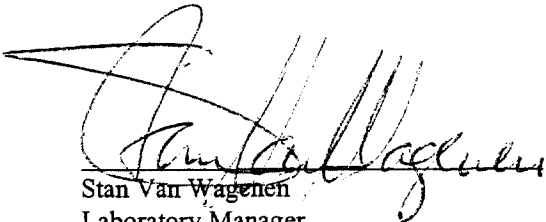
PROJECT NAME: FPF
PROJECT NUMBER: 97664 V3

NEL ORDER ID: L0110267

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 10/25/01.

Should you have any questions or comments, please feel free to contact our Client Services department at (702) 657-1010.


Stan Van Wageningen
Laboratory Manager

11/6/01
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Arizona	AZ0520	AZ0518	AZ0605
California	1707	2002	2264
US Army Corps of Engineers	Certified	Certified	

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
L.A.C.S.D.			10228

CLIENT: Geotechnical & Env. Serv.
PROJECT ID: FPF
PROJECT #: 97664 V3

CLIENT ID: North Shore Road Bridge
DATE SAMPLED: 10/25/01
NEL SAMPLE ID: L0110267-01

TEST: Inorganic Non-Metals
MATRIX: Aqueous

<u>PARAMETER</u>	<u>RESULT</u>	<u>R. L.</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Perchlorate	420	40.	10	EPA 314	µg/L	11/5/01

R.L. - Reporting Limi

D.F. - Dilution Factor

ND - Not Detected

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CLIENT: Geotechnical & Env. Serv.
PROJECT ID: FPF
PROJECT #: 97664 V3

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 011105CLO4-BLK

TEST: Non-Metals

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Perchlorate	ND	4	1	EPA 314	µg/L	11/5/01

D.F. - Dilution Factor

ND - Not Detected

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LETTER OF TRANSMITTAL

GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

7150 Placid Street
Las Vegas, Nevada 89119
(702) 365-1001 (702) 341-7120 (FAX)

TO: USEPA SFD 72 Date: November 7, 2001
75 Hawthorne Street
San Francisco, California 94105
ATTN: Mr. Kevin Mayer PROJECT: Las Vegas Wash @ the
GES PROJECT # Northshore Road Bridge
97664V3

WE ARE FORWARDING THE ITEMS LISTED BELOW VIA:

 MESSENGER PICK UP X U.S. MAIL "NEXT DAY"

COPIES	DESCRIPTION
1	Results of monthly surface water sampling of the Las Vegas Wash at the Northshore Road Bridge.

THESE ITEMS ARE SENT FOR: REVIEW COMMENT APPROVAL USE
 SIGN & RETURN OTHER:

REMARKS:

THIS MATERIAL SENT BY:
PLEASE SIGN AND RETURN ONE COPY OF TRANSMITTAL.

RECEIVED BY: TIME: DATE:

OTHER DISTRIBUTION:

If enclosures are not as noted, please notify us at once.